### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization International Bureau



## . I ABBI KINADA NEBANG KARAGAN KAN KAN BIRI TAKAN DINI BANA HANG KAN KAN KAN DAK DAKA BANA KAN DINI

(43) International Publication Date 29 January 2004 (29.01.2004)

PCT

# (10) International Publication Number WO 2004/009964 A1

(51) International Patent Classification<sup>7</sup>:

F01K 25/06

(81) Designated State (national): US.

(21) International Application Number:

PCT/CA2003/001077

1 C1/CA2003/0010//

(22) International Filing Date:

18 July 2003 (18.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2,393,386

22 July 2002 (22.07.2002) CA

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IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

#### Declarations under Rule 4.17:

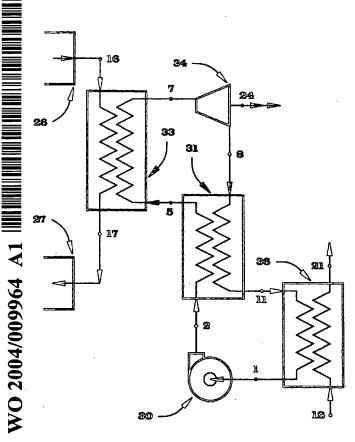
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
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- of inventorship (Rule 4.17(iv)) for US only

### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF CONVERTING ENERGY



(57) Abstract: The invention provides a method of converting heat energy to a more usable form using a multi-component working fluid mixture that contains ammonia and The working fluid is operated in a thermodynamic cycle that includes liquid compression (30), vaporization (33), expansion through a turbine (34) and condensing (36). The multi-component fluid varies in temperature during phase change allowing for the use of counter-flow heat exchangers for the heater (33), cooler (36), recuperator and pre-heater (32). Significant recuperation is possible due to the temperature change during phase change. A pre-heater (32) can be applied to ensure only single-phase vapour exists within the heater. The invention can be used in conjunction with a biomass combustor or with waste flue gas from an existing industrial process. The coolant exits at a temperature sufficient to allow use in external heating applications or to minimize the size of external heat rejection equipment.